

REMARKS

The applicant appreciates the Examiner's thorough examination of the application and request reexamination and reconsideration of the application in view of the following remarks.

The Examiner rejects claims 22-71 of the subject application under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,683,610 to *Richards et al.* in view of U.S. Patent No. 6,004,639 to *Quigley et al.*

Independent claim 22 of the subject application is directed to a foldable member comprising at least a first tube made of layers of material, at least one predetermined hinge area along the length of the first tube, and a plurality of opposing elongated slots in the tube through the layers of material forming separated longitudinal strips of layers of tube material between the slots which fold when subjected to localized buckling forces. Because of the slots, the foldable member can be folded and then released, whereupon it returns to its original configuration. See Figs. 1-3 and page 10, lines 1-6 of the subject application. Independent claims 30, 50, 52, 58, and 65-71 also include the feature that the tube is made of layers of material.

The Examiner alleges that *Richards* shows all of the features of the claimed invention, except for the tube being made of layers of material. The Examiner further alleges that *Quigley* shows a tube being made of layers of material, and that it would be obvious to one having ordinary skill in the art to modify *Richards'* structure to arrive at a tube made of layers of material because it would strengthen the tube against compression as taught by *Quigley*.

Richards is directed to an extension for a handle of a tool or similar device. The handle extension of *Richards* is a cylindrical-shaped hollow tube which includes a series of

slots 10. Together, the slots and strips of tube material form a clamping area 14. See Col. 3, lines 17-26; Col. 3, line 63-Col. 4, line 4 and Figs. 2 and 6 of *Richards*. In operation, the handle of a tool is telescopically inserted into the bore of the handle extension of *Richards*. A clamp 17 is mounted on clamping area 14 generally at its midpoint. Manipulation of wingnut 18 tightens band 16 about the clamping area which will radially compress the strips of material inwardly and clamp the strips uniformly against the handle of the tool. See Col. 3, lines 32-41 of *Richards*. It is the compression of the strips radially inward to grip the tool handle that secures the tool handle in a desired position within the handle extension. The handle extension of *Richards* is never meant to fold as shown by the applicant in Figs. 1-3, 8 and 13 of the applicant's disclosure. In summary, *Richards*' slots are designed for clamping; the applicant's slots are designed for folding.

Quigley discloses a composite coiled tube made of two or more layers driven down into a well. The *Quigley* tube is designed to withstand high pressures. See Col. 10, line 52 – Col. 11, line 23. *Quigley* clearly fails to suggest slots in the tube. In fact, *Quigley* teaches away from slots because the coiled composite driven down into a well must withstand 100,00 psi! Similarly, *Richards* fails to teach a tube which coils (like *Quigley*) or bends (like the applicant's novel design). Moreover, *Quigley* teaches that using a tube made of layers of composite material strengthens the tube against compression. However, easy compression of the clamping area is the essential feature of *Richards*. The reason for *Richards*' slots at the clamping areas of the tool handle extension is to enable compression of the strips of material against the tool handle. See Col. 1, line 7-Col. 2, line 4; Col. 2, lines 24-28; Col. 3, lines 37-41; and Col. 4, lines 8-11 of *Richards*. Thus, *Richards* teaches away from any modification which would prevent compression of the tube, such as by making the handle extension out of layers of material like taught by *Quigley*. Accordingly, *Richards* teaches away making the

tube of layers of material as taught by *Quigley*.

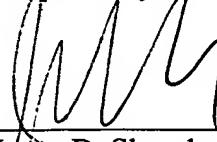
It is clear that one of ordinary skill in the art would not look to *Quigley* to make any modifications to *Richards* as the two references are non-analogous art. A handle extension for a tool such as a paint roller and a spoolable composite tube which includes various sensors are clearly not in the same or related fields, nor is *Quigley* pertinent to the particular problem with which *Richards* was concerned. Further, neither *Richards* nor *Quigley* are in the field of the applicant's invention nor are they pertinent to the problem solved by the applicant. Therefore, those skilled in the art would not look to either *Richards* or *Quigley* in analyzing the obviousness of the subject invention. A skilled artisan looking into the field of collapsible/foldable structures would clearly not look to the art or paint roller extensions.

Quigley and *Richards* teach away from each other, neither suggest the applicant's invention, and both are non-analogous to each other and non-analogous to the applicant's claimed invention. Therefore, claims 22-71 of the subject application are patentable over the cited references.

Each of the Examiner's rejections has been addressed or traversed. Accordingly, it is respectfully submitted that the application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned or his associates, collect in Waltham, Massachusetts, at (781) 890-5678.

Respectfully submitted,



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